

AMENDMENTS TO THE CLAIMS

This listing replaces all prior versions and listings of claims in the application.

Listing of Claims

1-7. (Cancelled)

8. (Currently Amended) A targeted drug delivery method that comprises

- (A) providing a composition comprising (i) intact, bacterially derived minicells that are approximately 400 nm in diameter and that are loaded with a therapeutically significant concentration of a small molecule drug that is a chemotherapeutic agent and (ii) bispecific ligands having specificity for a mammalian cell surface receptor and specificity for said minicells, wherein said bispecific ligands are attached to said minicells and wherein said composition is free of membrane blebs of 200 nm or less in size; and
- (B) contacting said composition with non-phagocytic mammalian cells, such that (i) said bispecific ligands cause said minicells to bind to said mammalian cells, (ii) said minicells are engulfed by said mammalian cells, and (iii) said ~~small molecule drug~~ chemotherapeutic agent is released into the cytoplasm of said mammalian cells.

9. (Cancelled)

10. (Original) The method of claim 8, wherein said bispecific ligand comprises polypeptide or carbohydrate or glycopeptide.

11. (Original) The method of claim 8, wherein said bispecific ligand comprises a first arm that carries specificity for a bacterially derived minicell surface structure and a second arm that carries specificity for a non-phagocytic mammalian cell surface receptor.

12. (Original) The method of claim 11, wherein said first arm and said second arm are monospecific.

13. (Original) The method of claim 11, wherein said first arm and said second arm are multivalent.

14. (Original) The method of claim 11, wherein said minicell surface structure is an O-polysaccharide component of a lipopolysaccharide on said minicell surface.

15. (Original) The method of claim 11, wherein said minicell surface structure is a member of the group consisting of outer membrane proteins, pilli, fimbrae, flagella, and cell-surface exposed carbohydrates.

16. (Cancelled)

17. (Original) The method of claim 8, wherein said bispecific ligand comprises an antibody or antibody fragment.

18. (Original) The method of claim 8, wherein said bispecific ligand comprises a humanized antibody.

19-20. (Cancelled)

21. (Original) The method of claim 8, wherein said mammalian cells are in vitro.

22. (Original) The method of claim 8, wherein said mammalian cells are in vivo.

23-30. (Cancelled)

31. (Withdrawn -- Currently Amended) A composition comprising (i) bacterially derived intact minicells loaded with a therapeutically significant concentration of a small molecule drug that is a chemotherapeutic agent and (ii) a pharmaceutically acceptable carrier therefor, wherein said minicells are approximately 400 nm in diameter and said composition is free of membrane blebs of 200 nm or less in size.

32. (Canceled)

33. (Withdrawn) The composition of claim 31, further comprising a bispecific ligand that is capable of binding to a surface component of said minicells and to a surface component of a non-phagocytic mammalian cell.

34. (Withdrawn) The composition of claim 33, wherein said surface component of a non-phagocytic mammalian cell is a receptor capable of activating receptor-mediated endocytosis.

35. (Withdrawn) The composition of claim 31, wherein said composition contains fewer than about 1 contaminating parent bacterial cell per 10^{10} minicells.

36. (Withdrawn) The composition of claim 31, wherein said composition contains fewer than about 1 contaminating parent bacterial cell per 10^{11} minicells.

37. (New) A composition comprising at least 10^7 bacterially derived intact minicells loaded with at least 8.5 ng of a small molecule drug that is a chemotherapeutic agent.

38. (New) The composition of claim 37, wherein said minicells are loaded with 66 ng of said chemotherapeutic agent.

39. (New) A drug delivery method that comprises administering to a cancer patient a composition comprising at least 10^7 bacterially derived intact minicells loaded with at least 8.5 ng of a small molecule drug that is a chemotherapeutic agent such that the chemotherapeutic agent is delivered to tumor cells in the patient.

40. (New) The method of claim 37, wherein said minicells are loaded with 66 ng of said chemotherapeutic agent.